

a silicon oxide film for sealing an etchant filling hole of a sacrificial layer on said diaphragm;

said semiconductor pressure sensor characterized in that a polysilicon film is provided to cover part or all of said silicon oxide film.

2. (Amended) A semiconductor pressure sensor according to Claim 1, characterized in that a distance of said covered part is at least 10 microns or less from said etchant filling hole.

3. (Amended) A semiconductor pressure sensor according to Claim 1, characterized in that a thickness of said polysilicon film is 0.1 microns or more.

4. (Amended) A semiconductor pressure sensor according to Claim 1, characterized in that a thickness of said polysilicon film is 0.1 microns or more up to and including 0.4 microns.

5. (Amended) A pressure detector, comprising:

(a) a detector providing an output, the detector including as an integral unit;

a substrate,

a diaphragm formed on said substrate by a sacrificial layer etching method,

a silicon oxide film for sealing an etchant filling hole of a sacrificial layer on said diaphragm, and

a polysilicon film covering part or all of said silicon oxide film;

(b) a correction circuit for correction of the output of said detector;

(c) a package enclosing said correction circuit and said detector; and

(d) an intake tube provided in said package, the intake tube being used for introducing external pressure to said detector.

6. (Amended) A pressure detector according to Claim 5, characterized in that a distance (h) of said covering part is at least 10 microns or less from said etchant filling hole.

7. (Amended) A pressure detector according to Claim 5, characterized in that a thickness (i) of said polysilicon film is 0.1 microns or more.

8. (Amended) A pressure detector according to Claim 5, characterized in that a thickness (j) of said polysilicon film is 0.1 microns or more up to and including 0.4 microns.

9. (Amended) A pressure detector according to Claim 5 comprising:

(e) a sub-package further comprising said correction circuit and said detector as an integral unit, and having on a surface a pad connected to said correction circuit, and

(f) an output terminal removably connected to an external signal line and being used to send a signal from said correction circuit to the external signal line;

said pressure detector further characterized in that

(g) said correction circuit and said detector are enclosed by said package after said pad and said output terminal are connected by a metal wire.

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(concluded) [Please add new claim 10 as follows:]

10. (new) A semiconductor pressure sensor, comprising:

a substrate;

a diaphragm arranged on the substrate, a gap between the diaphragm and the substrate being formed by sacrificial layer etching using etch channels arranged about a periphery of the diaphragm;

a silicon oxide film arranged over the diaphragm in order to seal the etching channels; and

a polysilicon film covering at least a substantial portion of the silicon oxide film.

(Applicants' remarks are set forth herein below starting on the following page).

covered by a polysilicon film as discussed above. Hence, Applicants submit claim 5 is patentable for the reasons given above. Also, dependent claims 6-9 recite additional features not taught or suggested by the MITANI or BARTH references.

Finally, Applicants have added an additional independent claim 10 likewise reciting the polysilicon film covering the silicon oxide film of the semiconductor pressure sensor. Hereto, this claim is also submitted to be patentable over MITANI in view of BARTH.

For the foregoing reasons, Applicants submit claims 1-10 are now in condition for allowance. An early notice to that effect is solicited.

Summarizing, Applicants have made an important contribution to the art to which the present subject matter pertains, for which no counterpart is shown in any of the art or combination of same. The invention is fully set forth and carefully delimited in all claims in this case. Under the patent statute, Applicants should not be deprived of the protection to which they are entitled for this contribution. Accordingly, it is respectfully requested that favorable reconsideration and an early notice of allowance be provided for all remaining claims.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and